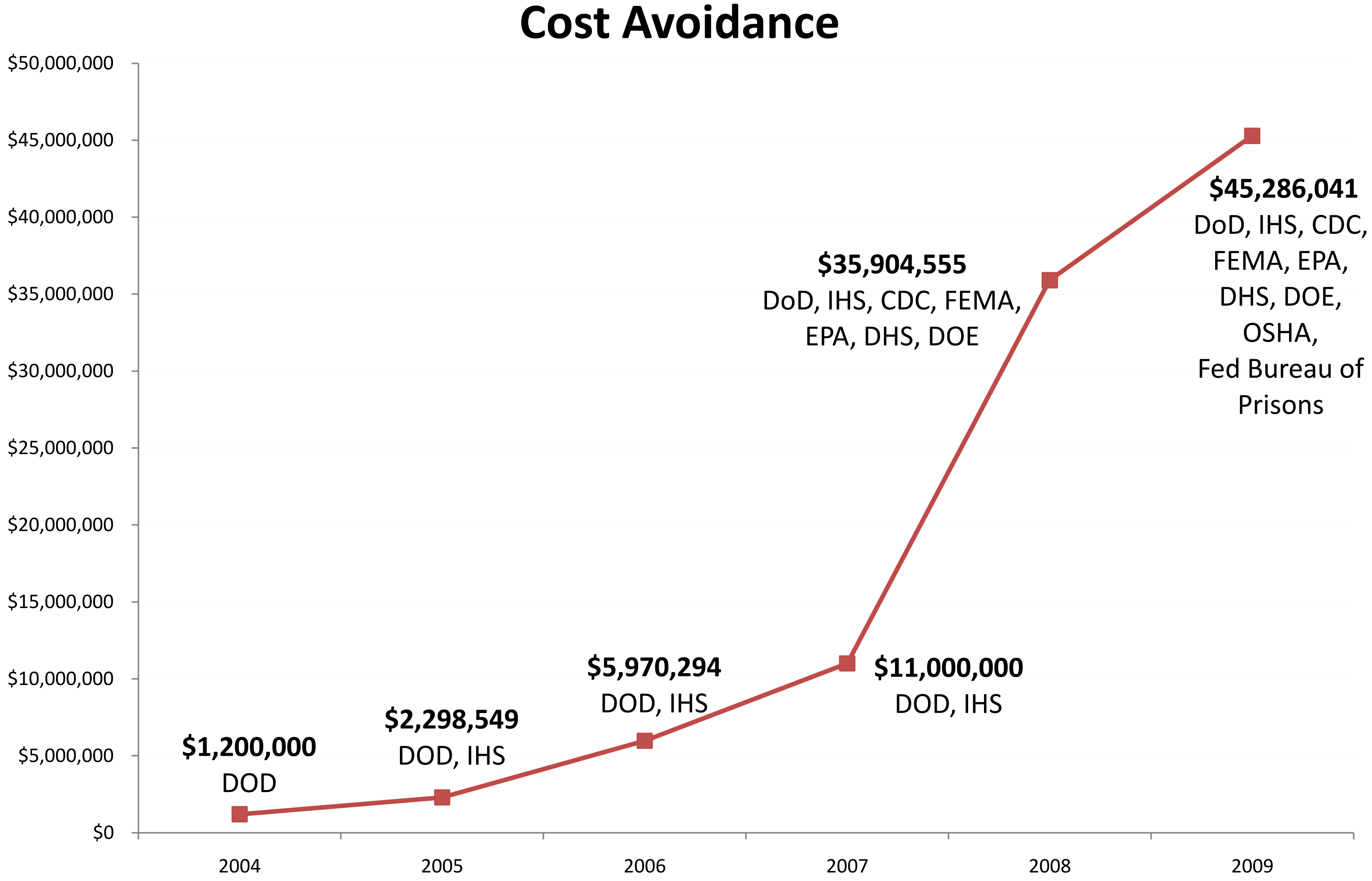
Interagency “Exchange” Architecture

Integrated approach towards search, storage, and testing of web-based course materials
from multiple government agencies

Sharing Initiative

- Extant training
  - Satellite,
  - Video,
  - e-Learning
- Collaboratively Developed
  - Prevention and Mgt of Destructive Behavior (PMDB)
  - Pharmacy Technician Training (PTT)

VA EES Interagency Sharing



Problems with Current Interagency Exchange Methods

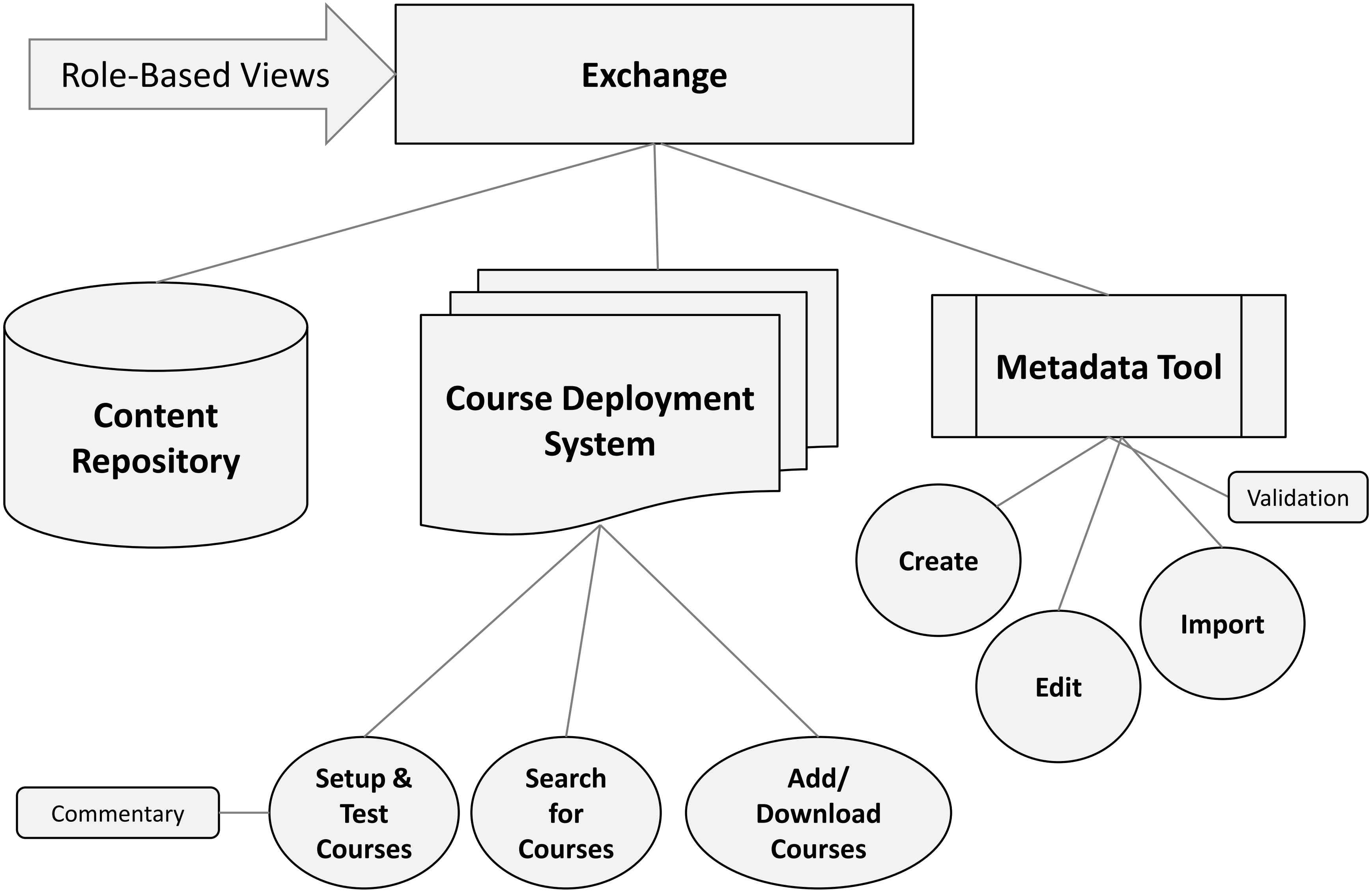
- **Wide variety of LMSs:**
  Plateau, Saba; some agencies have no LMS. When problems arise with a course package, it’s hard to pin down whether it’s the package itself or the receiving agency’s LMS
- **No central file transfer mechanism:**
  VA doesn’t have a dedicated FTP server for Exchange. Often, the same course package will get transferred to multiple agencies in a variety of different ways. Notification on version control is nonexistent.
- **No standard set of information attached to courses:**
  All agencies have their own version of an LMS submission form that needs to be filled in, i.e. technical issues (SCORM version, completion data, bookmarking, etc) and basic info (audience, keywords for searching, contact information, etc) but right now there is no centralized way of collecting and disseminating that information
- **No “try before you buy”:**
  Occasionally we go through the difficult process of transferring a course package and getting it up on the recipient’s LMS, only to find out that it didn’t really meet their needs and the effort was needless.

General Specifications

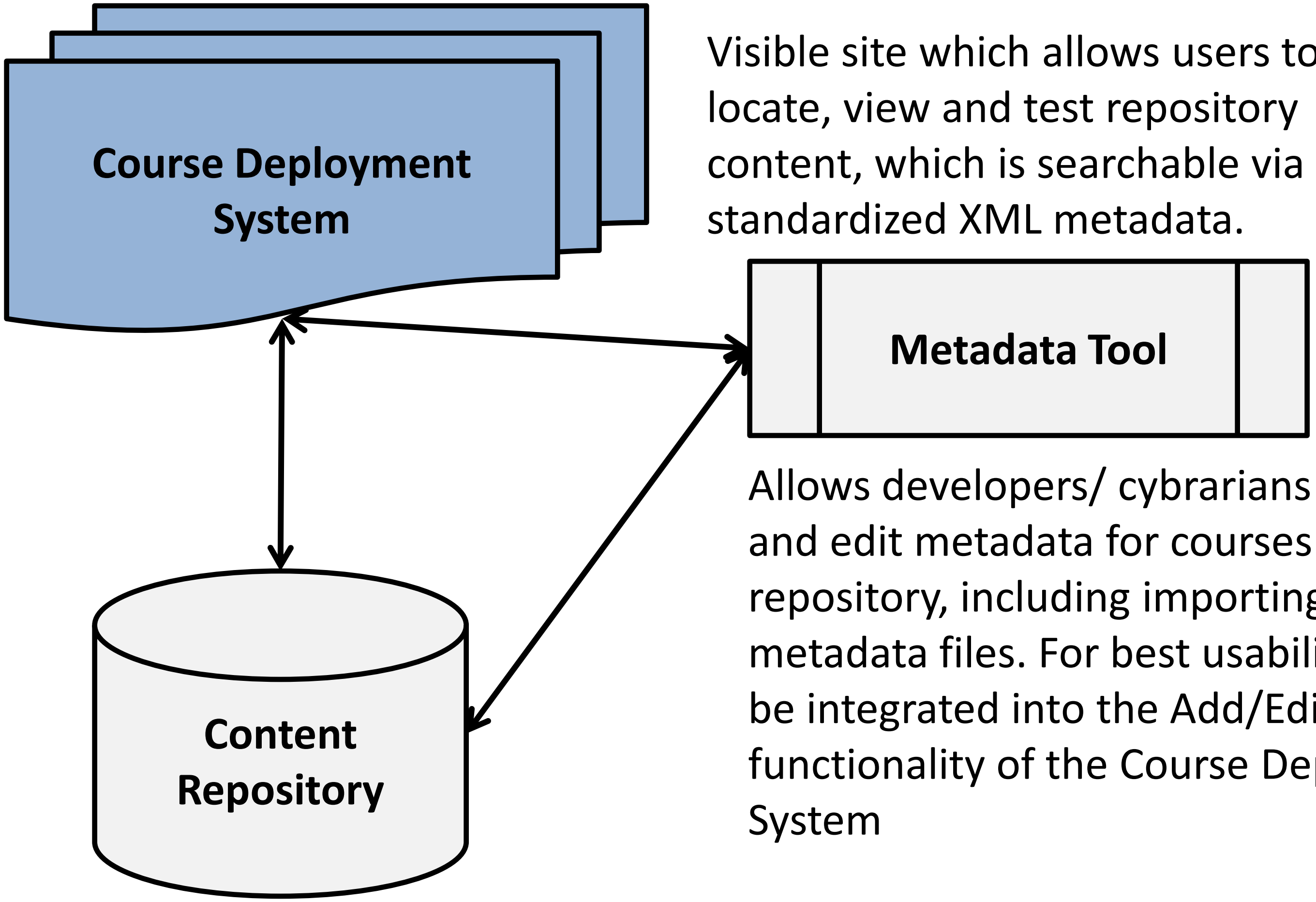
All components of this Interagency Exchange should be integrated into a single internet-based system, which is:

- Independent of any one agency’s servers, especially those behind firewalls or requiring regulated access
- Based on open-source software, so that it is not tied to a vendor and is both freely distributable and extendable to, and by, other agencies

Architecture Overview



General System Overview



Visible site which allows users to locate, view and test repository content, which is searchable via standardized XML metadata.

Allows developers/ cybrarians to create and edit metadata for courses in the repository, including importing existing metadata files. For best usability, should be integrated into the Add/Edit Course functionality of the Course Deployment System

Contains course packages, source files, completed metadata XML. Repository content is only accessible via the testing environment or metadata tool, there is no separate repository web-based interface.

Phase 1: Building the Basics

- **Testing environment:**
  Allows agencies to fully preview shared training materials to make sure they fit their needs
- **Search utility**
  Allows agencies to easily locate course materials that are truly relevant to their needs.
- **Course materials repository**
  Ensures that all shared training materials are easily accessible from one central location.
- **Metadata creation/editing tool**
  Ensures the inclusion and standardization of information that is vital to cataloging and implementing courses across multiple systems.

Phase 2

- Integrate the Clearinghouse repository into other existing repositories to allow such things as federated searching

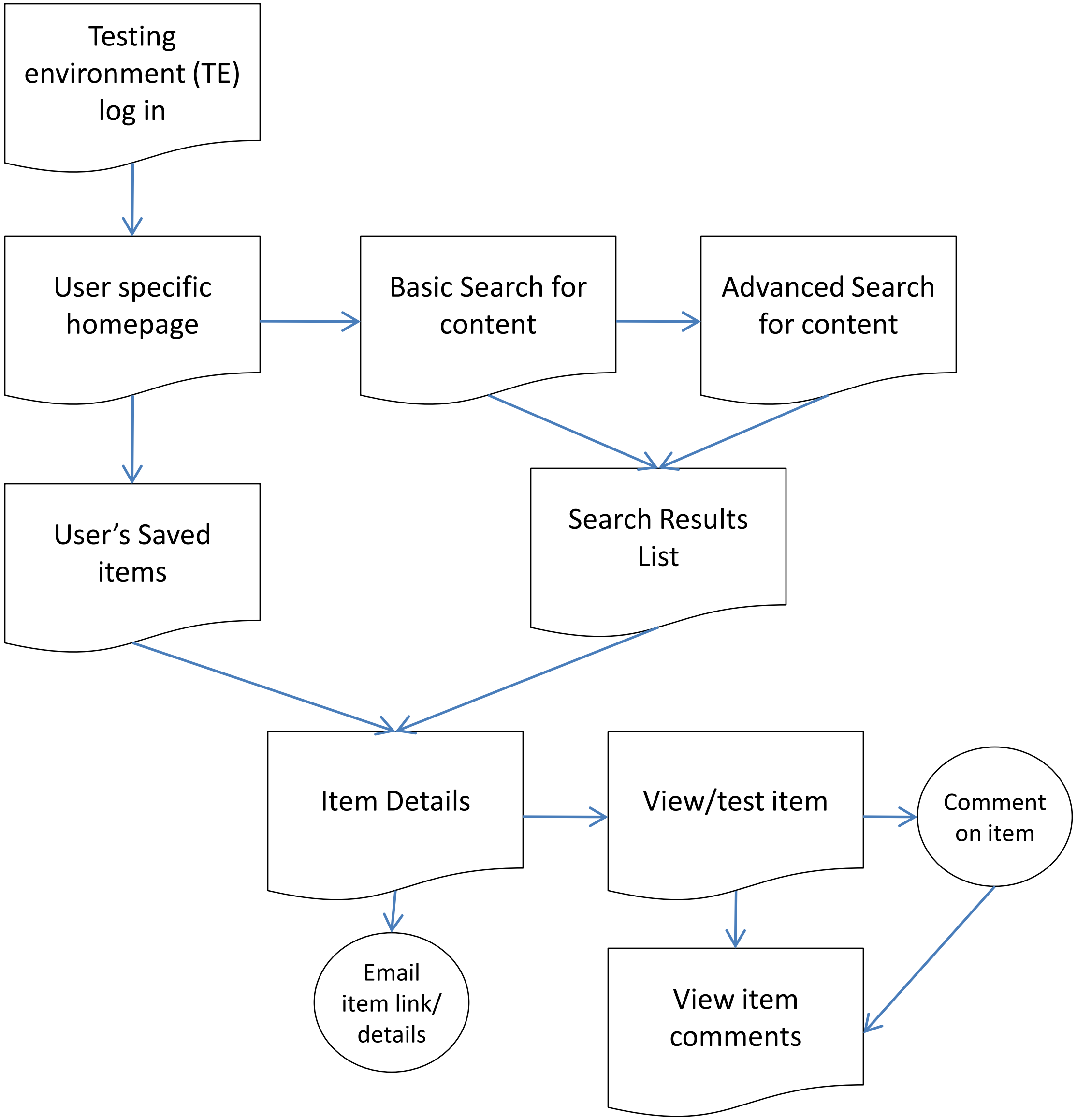
- Package the Clearinghouse system in a way that other government organizations can implement similar systems for themselves

Use Case: Actors

- Content Seekers (SMEs, Program Managers, etc)
- Cybrarians
- Courseware developers
- Agency Gatekeepers
- System Administrators

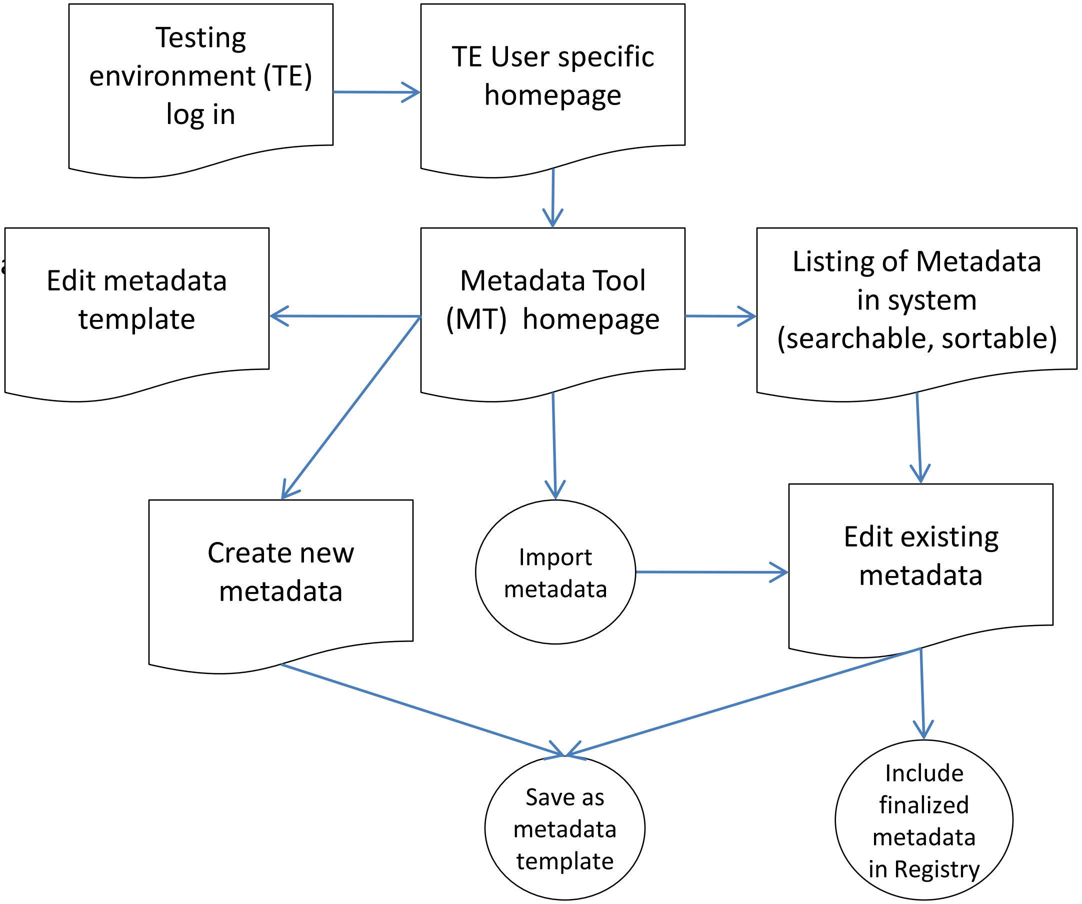
Sample Use Case: Content Seeker

1. User logs into the Testing Environment (TE)
2. User initiates a new search for content
   A. User can choose:
      - A Basic Search (Google-type search box)
      - A more Advanced Search
   B. User looks through a list of results matching their search
   C. User chooses to look at the details of an item
   D. From the details page, the user can either:
      - Save the item
      - View/test the item
      - Email the information about the item to someone else
3. User accesses a content item
4. User comments on an item
5. User views the comments on an item



Sample Use Case: Cybrarian

1. User can log onto the testing environment and have all the functionality of a Content Seeker
2. User has a link, on TE homepage, to Metadata Tool (MT)
3. Within the MT, user can:
    1. View a listing of ALL metadata in the system. This listing should be searchable, and sortable by:
        1. Agency
        2. ?
    2. Create a new instance of metadata for a course
    3. Edit an existing set of metadata XML
    4. Import metadata that was created by contractors/other applications into the system, which can then be edited
    5. Make sure that once metadata is approved and finalized, it is included in the centralized registry
    6. Save a metadata instance as a template to be reused


Testing environment (TE) log in
TE User specific homepage
Edit metadata template
Metadata Tool (MT) homepage
Listing of Metadata in system (searchable, sortable)
Create new metadata
Import metadata
Edit existing metadata
Save as metadata template
Include finalized metadata in Registry

Current Unknowns

- Can metadata search functionality be integrated within the Testing Environment?
- Will developers upload **source files** as well as completed packages?
- **Reporting:**
  - What kind of reporting capabilities will be required by each actor within the system?
- **Notifications:**
  - What events should trigger email notifications?
    - When a course is updated?
- **Visibility/security**
  - What capabilities will each user have?
  - Metadata and course packages will be shared with other agencies?
  - Should comments be kept within the Testing Environment only?